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XIV.—*Democritus' Theory of Sense Perception*

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LET us consider Democritus' theory of sense perception, first, as a soul-function, second, in its relation to thought, third, in its relation to the criteria of reality.

1. For Democritus the universal sense is touch.¹ It is by the means of some kind of physical contact that all the senses operate. Our philosopher has more to say of the sense of sight than of any other sense. In his explanation of sight on the theory of contact he provides certain *εἰδωλα*, which emanate from the surface of things, and which, after suffering a certain modification, enter the eye and cause us to see. Thus vision is the result of the impress of certain idols upon the organ of sight.² Idols stream in unbroken ranks from the surface of things, they navigate the air, they provoke vision, but they themselves are devoid of life.³ Idols thus emanating from external objects first of all push before them the intervening air, and as they approach the observer a complementary effluence from the eye meets and modifies those idols so that they enter the eye in a condition to stir the sense of sight.⁴ It is apparent that Democritus realized the importance of the aqueous humor in the eye. Aristotle seems to make him say that water is sight, and at the same time to say that vision (*ὄραν*) is *ἔμφασις*. And, observes Aristotle, it is absurd to suppose that it did not occur to Democritus to question why the eye alone sees, and that none of the other things upon which idols fall sees. And Aristotle agrees that *ὄψις* is truly *ὑδατος*, but maintains that

¹ Arist. *de Sensu*, 4.² Diog. Laert. IX, 44.³ Fr. 195 Diels.

⁴ Arist. *de Sensu*, 2, 438 a 5: Ἀημόκριτος δ' ὅτι μὲν ὕδωρ εἶναι φησι, λέγει καλῶς, ὅτι δ' οἰεῖται τὸ ὄραν εἶναι τὴν ἔμφασιν, οὐ καλῶς· τοῦτο μὲν γὰρ συμβαίνει ὅτι τὸ ὄμμα λείον, καὶ ἔστιν οὐκ ἐν ἐκείνῳ, ἀλλ' ἐν τῷ ὀρώντι· ἀνάγκη γὰρ τὸ πάθος . . . Ἀποπον δὲ καὶ τὸ μὴ ἐπελθεῖν αὐτῷ ἀπορῆσαι, διὰ τὸ ὅφθαλμός ὀρεῖ μόνον, τῶν δ' ἄλλων οὐδὲν ἐν οἷς ἐμφαίνεται τὰ εἰδωλα. Τὸ μὲν οὖν τὴν ὄψιν εἶναι ὑδατος ἀληθὲς μὲν, οὐ μέντοι συμβαίνει τὸ ὄραν, ἣ ὕδωρ, ἀλλ' ἣ διαφανές· ὁ καὶ ἐπὶ τοῦ ἀέρος κοινόν ἐστιν.

seeing does not take place because the humor of the eye is water but because it is transparent; and this is a common property with air. But, continues Aristotle, water is more easily compacted and held in restraint than is air, therefore the pupil and the eye are water. Empedocles also resorted to a similar modification of the original images from objects in making his explanation of the sense of sight. It is named⁵ by Empedocles in some of the accounts ἀκτινείδωλον, 'ray-image.' Some critics think⁶ that Democritus held that only the air entered the eye, — the air pushed forward by the ever emanating stream of idols, and that the idols themselves cannot reach the eyes. It is granted on all sides that the idols do not enter the eye in an unmodified form, but there seems to be no warrant whatever for the notion that in Democritus' teaching vision is produced by anything else than by idols which enter the eye.⁷ It certainly does no violence to the known or to the reported statements of Democritus to conclude that the ray-image, as found in the doctrine of Empedocles, was adopted by Democritus as a means of explaining sight.

Let us examine more closely the nature of ἔμφασις, which, in the Democritean system, accounts for the sense of sight. Ἐμφασις everywhere among the Pre-Socratics and in Democritus means a modified image or representation. Its primary meaning in Democritus is the image which makes its way into the eye and causes vision. It is not an original

⁵ Aët. *Plac.* IV, 13, 2: καὶ κατὰ τινων ἀκτίνων ἔκκρισιν μετὰ τὴν πρὸς τὸ ὑποκείμενον ἔνστασιν πάλιν ὑποστρεφουσῶν πρὸς τὴν ὄψιν. *Ib.* 4: Ἐμπεδοκλῆς καὶ πρὸς τὸ διὰ τῶν ἀκτίνων καὶ πρὸς τὸ διὰ τῶν εἰδώλων ἐκδοχὰς παρέχεται. πλείους δὲ πρὸς (τὸ) δεύτερον. τὰς γὰρ ἀπορροίας ἀποδέχεται. Cf. *ib.* 1: Λευκίππος Δημόκριτος Ἐπίκουρος κατὰ εἰδώλων εἰσκρισιν οἴονται τὸ ὁρατικὸν συμβάλειν πάθος. *Ib.* 5: Ἐμπεδοκλῆς τοῖς εἰδώλοις τὰς ἀκτίνας ἀνέμιξε προσαγορεύσας τὸ γιγνόμενον ἀκτινείδωλον συνθέτως.

⁶ Zeller, *Pre-Socr. Phil.* II, 268.

⁷ The passage, *Fr.* 167 (*Simpl. Phys.* 327, 24) quoted by Zeller (*l.c.* 268), in which he proposes to read δέικελα instead of δέιν, is, with more consistency made by Diels to read δῖνον, 'wirbel,' 'rotation,' and has reference not to 'representations,' but to the motion of original substance. This is clear from Simplicius' words ἀπὸ ταῦτομάτου καὶ τύχης γεννᾶν, which could scarcely be connected with emanations from objects.

idol, but is an original idol modified by its contact with the air in making its way from the object to the eye, and by the emanations from the eye which proceed from the observer toward the approaching image. The resulting modified image, thus formed while the elements entering into its make-up are still in space, enters the eye and makes contact with the sense of sight. Witness the words of Theophrastus, *de Sensu*, 50 (Diels, *Frag.* i, 373, 27 ff.): ὁρᾶν μὲν οὖν ποιεῖ τῇ ἐμφάσει· ταύτην δὲ ἰδίως λέγει· τὴν γὰρ ἔμφασιν οὐκ εὐθὺς ἐν τῇ κόρῃ γίνεσθαι, ἀλλὰ τὸν ἀέρα τὸν μεταξὺ τῆς ὀφθαλμοῦ καὶ τοῦ ὁρωμένου τυποῦσθαι συσσελλόμενον ὑπὸ τοῦ ὁρωμένου καὶ τοῦ ὁρώοντος· ἅπαντος γὰρ αἰεὶ γίνεσθαι τινα ἀπορροήν· ἔπειτα τοῦτον στερεὸν ὄντα καὶ ἀλλόχρων ἐμφαίνεσθαι τοῖς ὀφθαλμοῖς. Again, Theophrastus (*ib.* 80), says: ὁρᾶν δὲ φησὶ διὰ τὴν ἀπορροήν καὶ τὴν ἔμφασιν τὴν εἰς τὴν ὄψιν.

From these statements it is plain that the ἔμφασις is not formed in the eye; that the air between the eye and the visible object is contracted and moulded; that this entity in fixed form different from the original idol makes its impress in the aqueous humor of the eye. In other words, vision is accomplished by idols which in modified form come into the eye. This, too, is virtually what Aristotle attributes⁸ to Democritus. For, says the Stagirite, when Democritus says that water is the means by which we see he speaks aright; but when he imagines that vision is the image (ἔμφασις) in the eye he is mistaken. And Aristotle concedes⁸ that it is true that vision is caused by water (*i.e.* the aqueous humor of the eye), but maintains that sight is not produced because the substance is water, but because it is transparent. Aristotle also holds that sight is not in the eye but in the one seeing; for refraction is feeling.

Furthermore, Anaxagoras, Diogenes, and Leucippus held practically the same theory of vision as that set forth by Democritus. Anaxagoras says⁹ that vision arises from the image (ἔμφασις) in the pupil of the eye; Diogenes,¹⁰ that vision is accomplished by images impressed upon the pupil

⁸ See n. 4.⁹ Theophrastus, *de Sensu*, 27; Diels, *l.c.* 310, 20 ff.¹⁰ Theoph. *ib.* 39; Diels, 331, 10 ff.

of the eye, and that this mixed with the air within causes the sensation of sight; Leucippus,¹¹ that vision results from the receiving of the impression from the visible objects; that the image (*εἰκασία*) is the form as it appears in the pupil of the eye, just as reflection appears in other transparent substances which are of such a quality as to preserve the reflection in them. The only variation worthy of note in these three accounts is that Diogenes makes the air and the image enter the eye separately, and unite after they have entered. Democritus and the rest hold that the transformation of the image is accomplished in space. This is all that Democritus has to say about the process of vision. Evidently he took it for granted that if he could make clear the process by which the image of a visible object reached and entered the eye, he had done all that was necessary, since at that juncture the general theory of touch as the universal sense would make all clear.

But Democritus does mention some idols that are peculiar in themselves. He said,¹² for example, that envious people send out images which are not altogether void of sense and force,¹³ but full of disturbing and poisonous qualities of those from whom they come. These being mixed with such qualities and remaining with and abiding in those persons that are looked at disturb and injure them both in mind and in body. Further than this Democritus held ¹⁴ that certain idols appear to men, some of them giving a sign for good, others a sign for ill; that these are large, difficult to destroy, yet are not indestructible; that they indicate to men the things that will come to pass; that they are visible, and that they utter a voice. Whence, he continues, men of old, apprehending the appearance of these, thought they were gods, since there was no other god beside these having an immortal nature. Again, our philosopher said ¹⁵ that dreams are caused by *εἰδωλα* which proceed from things. He also mentions ¹⁶ day-dreams, which

¹¹ Alex. *de Sensu*, 24, 14; Diels, 348, 34 ff.

¹² Plut. *Qu. Conviv.* v, 7, 6; Goodwin's translation slightly modified.

¹³ Cf. n. 3, where it is shown that the common idols are without life.

¹⁴ Fr. 166.

¹⁵ Arist. *de Divin.* 2.

¹⁶ Fr. 212.

probably for him were caused by certain peculiar idols. Furthermore, there seems to be in Democritus' teaching a hint that the operations of the senses are in conflict with the independent operations of the mind.¹⁷ Cicero remarks of Democritus that having lost his eyesight he could not distinguish between white and black, but that he could discern between good and evil, justice and injustice, honor and dishonor, . . . and that he could live happily without the sense of sight but not without a notion of things; that he thought the keenness of the mind was impeded by the eyesight, and when others often could not see what was before their feet, he traversed in thought all infinity. It was also said¹⁸ of Democritus that he even inflicted blindness upon himself.

Of the extent and scope of vision in Democritus' teaching Aristotle¹⁹ makes this observation, that if the intervening space were void, an ant even in heaven could be clearly seen. This is not out of keeping with the other reports of his theory, which, as we have seen, show that the air has an important effect on the idols which are emitted from the surface of things as they travel toward the eye.

Next to sight, Democritus speaks in detail of the sense of hearing. This, like sight, is explained on the principle of touch. For, whether the sense be accomplished on the surface or within the body, it is to be explained universally on the principle of touch.²⁰ A resonant body sends forth a stream of atoms which strike the air and set it in motion. These atoms enter the whole body, but in largest numbers through the ears, so that only the ears hear. When these bodies have entered, they are quickly dispersed throughout the body, for sound comes from the air that is condensed and moves forward with force. These bodies then come in con-

¹⁷ Cic. *Tusc.* v, 114: atque hic vir impediri etiam animi aciem aspectu oculorum arbitrabatur.

¹⁸ Gell. x, 17, 1: Democritum . . . luminibus oculorum sua sponte se priuasse. Laberius gives as a reason for self-inflicted blindness "that he might not see that it was well with wicked citizens." Diels, *l.c.* 355-356.

¹⁹ *De Anima*, II, 7, 6.

²⁰ Theoph. *de Sensu*, 55: ὥσπερ οὖν ἐκτὸς ποιεῖ τῇ ἀφ᾽ ἧ τὴν αἰσθησιν, οὕτω καὶ ἐντός.

tact with the atoms of the soul, and hearing is accomplished.²¹ For when anything enters the ears it streams through the whole system, inasmuch as the sense is not in the ears but in the whole body.²² For, if anything should not harmonize with the ear, yet for all that it is also heard. In such wise does Democritus treat all the senses, and not the senses only but the soul as well.

2. We may now turn to the function of sense as related to the process of thought. Democritus is said²³ to have held that thought is produced proportionately to the mixture of the soul in which the thought is held. For, he alleges, if one becomes very hot or very cold, it (*i.e.* the soul, the thought) is changed, . . . so that it is plain that he makes thought depend upon the mixture (of the elements) in the body. And thought itself is body just as much as is that (substance) which composes the soul, and rightly so. This reminds us of Aristotle's comment²⁴ that if the soul itself is a certain body, then the body itself must contain two bodies. And for this very reason, continues Aristotle, Democritus has great difficulty in maintaining his theory that the body is moved by the soul. Again, Democritus is said to teach that that which perceives and that which thinks are one and the same thing; that *ψυχή* and *νοῦς* are one.²⁵ We have seen already that *ψυχή* is the organ by which sensible perception is experienced. It now appears that for Democritus the faculty of perception and the faculty of thinking are the same thing. In other words, Aristotle thinks that Democritus does not distinguish the separate functions of intelligence and mind from the function of feeling. With all the materialists these

²¹ *Id. ib.* 55.

²² *Id.* 57. This to Theophrastus was a strange doctrine. His words are: ἀποπον δὲ καὶ ἴδιον (τὸ) κατὰ πᾶν τὸ σῶμα τὸν ψόφον εἰσιέναι, καὶ ὅταν εἰσέλθῃ διὰ τῆς ἀκοῆς διαχεῖσθαι κατὰ πᾶν, ὥσπερ οὐ ταῖς ἀκοαῖς, ἀλλ' ὅλῳ τῷ σώματι τὴν αἰσθησιν οὖσαν. οὐ γὰρ κἂν συμπάσῃ τι τῇ ἀκοῇ, διὰ τοῦτο καὶ αἰσθάνεται. πάσαις γὰρ τοῦτό γε ὁμοίως ποιεῖ, καὶ οὐ μόνον ταῖς αἰσθήσεσιν ἀλλὰ καὶ τῇ ψυχῇ.

²³ *Id.* 58: περὶ δὲ τοῦ φρονεῖν ἐπὶ τοσοῦτον εἰρηκεν ὅτι γίνεται συμμέτρως ἐχούσης τῆς ψυχῆς κατὰ τὴν κρῆσιν· ἐὰν δὲ περίθερμός τις ἢ περίψυχρος γένηται, μεταλλάττειν φησί. . . . ὥστε φανερόν, ὅτι τῇ κράσει τοῦ σώματος ποιεῖ τὸ φρονεῖν, ὅπερ ἴσως αὐτῷ καὶ κατὰ λόγον ἐστὶ σῶμα ποιοῦντι τὴν ψυχὴν.

²⁴ *De Anima*, I, 5, 1.

²⁵ *Id.* I, 2, 5.

functions are much the same, but it is common among those who followed Democritus to set apart *animus* or *mens* from *anima*, making use of the former in dealing with mental processes, and of the latter in dealing with the sensibilities. And it is true that Democritus considered²⁶ thought and perception through sense merely as changes in matter. In this sense all presentations and all representations are physical changes in the material substance of the soul.

Democritus is said, however, to distinguish between the functions of the soul as to their location, saying that thought is located in the brain,²⁷ anger in the heart,²⁸ and desire in the liver.²⁹ If this is so, it can scarcely be correct to conclude that in his doctrine all mental processes and all soul functions are the same. It is true that in so far as they involve a change (*ἀλλοίωσις*) in the finer substance of the soul they are all similar. While it might be admitted that in process thought, as such, is the same as perception through sense, it cannot be true even for Democritus that in content the passions and desires are the same as perception through sense. But a closer examination of the passages³⁰ in which these

²⁶ Aët. *Plac.* IV, 8, 5; Dox. 394: Λευκίππος, Δημόκριτος τὰς αἰσθήσεις καὶ τὰς νοήσεις ἑτεροιώθεις εἶναι τοῦ σώματος. Theoph. *de Sensu*, 49: Δημόκριτος δὲ . . . τῷ ἀλλοιοῦσθαι ποιεῖ τὸ αἰσθάνεσθαι. *Ib.* 58: περὶ δὲ τοῦ φρονεῖν ἐπὶ τοσοῦτον εἰρηκεν ὅτι γίνεται συμμετρῶς ἐχούσης τῆς ψυχῆς κατὰ τὴν χρῆσιν. . . ὥστε φανερόν, ὅτι τῇ κράσει τοῦ σώματος ποιεῖ τὸ φρονεῖν. Arist. *Metaph.* III, 5; 1009 b 12: διὰ τὸ ὑπολαμβάνειν φρόνησιν μὲν τὴν αἰσθησιν, ταύτην δ' εἶναι ἀλλοίωσιν.

²⁷ Hippocrates, XXIII, 3; Diels, *l.c.* 448, 15.

²⁸ Hipp. *ib.* 6; Diels, 448, 29.

²⁹ Hipp. *ib.* 7; Diels, 448, 32.

³⁰ See n. 26, including the passages from Aëtius, Theophrastus, and Aristotle. The passage from Aëtius makes use of the term *ἑτεροιώθεις*, but this is equivalent to *ἀλλοίωσις*; the statement of Theophrastus (49) raises the question whether the motion of sense is roused by like or unlike things, but in either case sense is a change; the same author also states (58) that thought depends upon the motion set up in the body; Aristotle states clearly that those who consider thought and sense the same consider them as change. It is clear then that the identity of thought and sense-perception in Democritus is an identity of process, *i.e.* of motion.

In his discussion of this point Zeller (*l.c.* 272) thinks that the faculty of perception is, by the atomists, identified with the faculty of perception. The identity lies rather in the process. And while it may be true, as Zeller thinks (see p. 271 n.), that Democritus never tried to establish psychologically the superiority of thought to sensible perception, yet it is true, according to the accounts of

functions of the soul are mentioned reveals the fact that, while thought is called sense perception (*φρόνησις, αἴσθησις*), the nature of the identity of these processes is also mentioned, viz., the identity of change (*ἀλλοίωσις*), that is, motion. None of the passages intimates that the change in the two processes is the same change. The emphasis is entirely on the fact that the mind and soul, which are the same in that they are material in their nature, perform their functions just as other bodies of matter perform theirs. That is, matter in motion tends to communicate that motion to contiguous matter, whether that matter in motion be the substance of objective realities or the finer, more attenuated substance of the mind and soul. So, then, we are justified only in the conclusion that the identity of thought and sense-perception is an identity of process, — a process of motion by which certain changes take place in the soul. The doctrine thus properly interpreted affords ample opportunity for the psychological theory of Democritus to be rounded out with very little change. In fact, later writers appropriately attach certain functions to the intellectual phase of the soul, and certain other functions to that phase of the soul which comes in contact through the senses with the outer world; but such changes are by way of additions only and do not affect the fundamentals of the doctrine.

3. Let us now examine Democritus' teaching respecting thought and sense-perception with reference to the formation of criteria of reality. Reality for Democritus is said³¹ to consist in the existence of atoms and void. Laetius³² adds that the beginnings of all things are, for Democritus, atoms and void, and that all other things are in the mind. Further-

his doctrine transmitted to us, that Democritus did teach the superiority of the content of thought to that of sense-perception. And there is no good reason why Democritus should attempt to establish the superiority of one of these processes over the other, as processes, since both are processes of motion. For a detailed account of the nature of sense-perception in the later atomistic theory, see *Lucr. de Rerum Natura*, IV, 26-323; for the account of the nature of voluntary thought see *ib.* 722-822.

³¹ Sext. *Emp. Adv. Math.* VII, 135; cf. Fr. 69.

³² *Diog. Laert.* IX, 44.

more, it is said³³ in this connection that those sense objects which are considered and thought to exist do not in reality exist. So, observes Sextus,³⁴ Democritus takes away even those things which appear to the senses, saying that none of these things appears according to reality, but only according to opinion, whereas truth rests in the existence of atoms and void. Already in these accounts we are confronted with conflicting statements: 1. Atoms and void only are real; 2. Sense-objects exist only in the mind; 3. But atoms and void, the only realities, are beneath the senses to comprehend, and so can exist only in the mind. From these statements we conclude at once that *φρόνησις*, in content, is not the same as *αἴσθησις*. There is set here an arbitrary limit to truth. It is the reality that is beyond the power of the senses to perceive. The real knowledge of ultimate matter (*i.e.* reality) cannot come to the soul through the medium of sense since the senses cannot apprehend ultimate matter.³⁵ Therefore, knowledge of ultimate reality is presentative, intuitive, *a priori*, direct (to use modern terms). It is in the mind first and last, and nowhere else. But on the other hand it is said that the things also that appear to the senses exist only in the mind. Aristotle saw this inconsistency and concluded that Democritus made truth (*τὸ ἀληθές*) equal to *τὸ φαινόμενον*, and that he did not use the term "mind" to denote a faculty concerned with truth, but treated the mind and the soul as the same thing.³⁶ Again arguing the same point, from the premise that the same things appear differently to us than to other animals, and that the same things do not always appear the same to us, Aristotle quotes Democritus as saying³⁷ that either nothing is true, or it is not plain to us. The same idea, too, seems to be conveyed by Democritus in an extant fragment in which he says that in reality we know nothing, for the truth lies in the depths.³⁸

³³ Sext. Emp. *ib.* 135.

³⁴ *ib.*

³⁵ Simplicius, *de Caelo*, p. 294, 33; Diels, 359, 13.

³⁶ *De Anima*, I, 2, 404 a 27; cf. *id. Gen. Corr.* I, 2, 4.

³⁷ *Metaph.* III, 5, 1009 b 11.

³⁸ Fr. 117. Diog. Laert. IX, 72.

But Sextus comes forward with the statement³⁹ that for Democritus there are two forms of cognition, one real, the other obscure; of the obscure form are all these: sight, hearing, smell, taste, touch. But the real form is distinct from this. . . . Since, then, the obscure cognition can neither see the smaller things, nor hear nor smell nor taste nor sense them by touch, but (recourse must be had) to the more subtle things (then the real cognition, which is located in the finer thought, is brought into requisition). Therefore, concludes Sextus, for Democritus reason (*λόγος*), which he styled genuine cognition, is the criterion of fact. Again, in this same line, Diotimus, as reported by Sextus,⁴⁰ says that Democritus held three criteria, viz., one of the comprehension of the phenomena of the obscure, one of the inquiry into thought, and one of the pursuit and the avoidance of the inner impulses. It is here worthy of note that Diotimus' account adds no new element with respect to reality, but a new element with respect to conduct. The two criteria, one of the inner thought, and one of sensible phenomena, persist.

The accepted reports, then, of Democritus' teaching about reality and our knowledge of it resolve themselves into these propositions: 1. Atoms and void are the only realities. 2. There is no reality, or it is wrapped in obscurity. 3. The senses cannot reveal to us ultimate reality because they cannot perceive atoms and void, which are the only realities. 4. Sense objects exist only in the mind. 5. There are two forms of cognition, one real, the other obscure. The real form is the direct, the obscure form is the indirect (through sense). 6. *Λόγος*, genuine cognition, is the criterion of reality; sense is the criterion of phenomena. 7. A third criterion, a criterion of conduct, may exist.

From these statements it is increasingly clear that in Democritus' teaching *φρόνησις* and *αἴσθησις* are not identical in content. And this is the more certain from the further consideration that dreams are said⁴¹ by Democritus to be

³⁹ Sext. Emp. VII, 139. It should be noted that this quotation by Sextus constitutes a genuine fragment from Democritus. Cf. Diels, Fr. II.

⁴⁰ *Adv. Math.* VII, 140.

⁴¹ Arist. *de Divin.* 2.

caused by *εἶδωλα* which proceed from things. Democritus himself, in one of the fragments, speaks⁴² of day dreams, which indicate a disturbance of the body, or distress or idleness or want of discipline of the soul. Furthermore, there is in sleep a certain outgoing of fiery particles which are lost to the soul, the sensitiveness of which is thereby reduced.⁴³ Activity of the mind independent of the senses is also in evidence. For, says Democritus,⁴⁴ divine things are thought in the mind. Forgetfulness, too, which stands somewhat as the reverse of cognition, and which is to be considered as a phase of the mind independent of the senses, belongs to the teaching of Democritus.⁴⁵ Activity of the mind independent of the senses is ascribed to Democritus by Horace⁴⁶ when he says we wonder if the herd of Democritus breaks in and crops the grain, while his keen mind without his body travels swiftly abroad.

Mind and sense, then, in Democritus' teaching are not entirely identical either in process or in content. In process they are identical in that they both operate by means of change, that is, motion, but only so are they identical. In content, the sense can only connect us with sense objects and judge of the secondary qualities of things.⁴⁷ The mind, however, knows reality directly, is the judge of reality, and operates at times independently of sense.

⁴² Fr. 212: *ἡμερήσιοι ὕπνοι σώματος ὀχλήσιν ἢ ψυχῆς ἀδημοσύνην ἢ ἀργίην ἢ ἀπαιδευσίην σημαίνουσι.*

⁴³ Cf. Lucr. *de Rer. Nat.* IV, 916 ff.

⁴⁴ Fr. 129: *φρὲν θεῖα νοῦνται.* It may not be strictly logical, but one feels a strong inclination to connect this statement with the statement that the atoms are divine elements, thus revealing one object of the mind's independent reflection.

⁴⁵ Fr. 196.

⁴⁶ *Epist.* I, 12, 12: *Miramur, si Democriti pecus edit agellos | cultaque, dum peregre est animus sine corpore velox.* Cf. Cic. *Fin.* v, 87: *certe ut quam minime a cogitationibus abduceretur, patrimonium neglexit, agros deseruit incultos.*

⁴⁷ See n. 39.